Articles

Economists' Perspectives on Health Care Delivery in California as of 1995

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This paper was prepared in 1996 by combining excerpts from "Managed Competition and California's Health Care Economy" by Alain Enthoven, PhD, and Sara Singer, MBA, Stanford University's Graduate School of Business, and "Vertical Integration and Organizational Networks in Health Care" by James Robinson, PhD, University of California, Berkeley, and Lawrence Casalino, MD, PhD, Stanford Coastside Medical Clinic, both published originally in a thematic issue of Health Affairs *devoted to California in spring 1996. The excerpts were blended for the convenience of the members of the University of California's Commission on the Future of Medical Education in order to prepare a comprehensive view and interpretation of the market as it stood then. Since that time, the market has changed a great deal and the authors' views have evolved. The Robinson-Casalino excerpts are reproduced with their permission, and the Enthoven-Singer excerpts are reproduced with theirs; the whole paper has been reproduced with the permission of* Health Affairs.

The health care delivery system is made up of providers—hospitals and doctors—increasingly organized into medical groups. Medical groups interact with payors, primarily health maintenance organizations, that increasingly pass through both risk and prices from increasingly demanding purchasers. This article summarizes the present and future prospects for each of these groups.

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The financing system that is emerging in California, but for the notable exception of Kaiser Permanente, is made up of delivery systems marketed by several carriers, each of which markets many other delivery systems as well. These "carrier HMOs [health maintenance organizations]" come in a variety of forms. The most effective competitors contract with multispecialty group practices and selective independent practice associations (IPAs) on a per capita basis. Other carriers create a network by contracting with unrelated physicians.

The current system developed in part as a consequence of provider resistance to managed care. Providers made the transition reluctantly, only because the carrier HMOs created the competitive market that required them to do so. Delivery system competition did not emerge for several reasons:

- Traditionally, physicians take home the profits in their group practices, leaving no capital to create organized systems and finance expansion;
- Medical groups are democratic, and successful physicians have no incentive to change or expand their practices; and
- Most physicians lack management expertise. In addition, physicians have traditionally been reluctant to monitor and report publicly about their quality and to dismiss poor performers from their groups. Nonprofit delivery systems had weak incentives to expand because they are not motivated by profit. Even in Kaiser Permanente, the drive for expansion came more from management than physicians.

Carrier competition happened because the California market provided a large profit opportunity. Premiums were rapidly increasing. There was a large surplus of hospitals and doctors due to the previous period of open-ended cost-unconscious demand. Employers wanted the simplicity of offering one or a few carriers while offering employees a wide choice of providers, so the carriers moved rapidly to sign up large networks. Purchasers started to demand and reward value for money. Carriers could make large profits by supplying less costly coverage while driving hard bargains with the providers, over whom they had leverage because they controlled the flow

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ABBREVIATIONS USED IN TEXT

AHA = American Hospital Association
CalPERS = California Public Employees Retirement System
CHW = Catholic Healthcare West
FEHBP = Federal Employees Health Benefits Program
FFS = fee-for-service
HEDIS = Health Plan Employer Data and Information Set
HIPC = Health Insurance Plan of California
HMO = health maintenance organization
IPA = independent practice association
PBGH = Pacific Business Group on Health
UC = University of California
UMGA = Unified Medical Group Association (now AGPA, American Group Practice Association)

of contracts. Faster growth generated higher profits and market capitalizations, so the carriers rushed to expand.

From the purchaser's point of view, carrier competition is superior to no competition. Competition among carriers offering essentially the same provider networks also helps to limit risk selection and to make demand price elastic. However, carrier competition has left some problems to be resolved. What is interesting to observe is how market forces are working to resolve them.

- If several carriers offer essentially the same delivery systems, purchasers cannot make meaningful or useful comparisons of quality of care. Now, major purchasers such as the California Public Employees Retirement System (CalPERS) and Pacific Business Group on Health (PBGH), through the California Cooperative HEDIS [Health Plan Employer Data and Information Set] Reporting Initiative, plan to reach through the carriers and demand delivery system–specific quality data.
- This model insulates delivery systems from market forces in that a medical group cannot attract more members by cutting cost and price because the carrier controls the price to the purchaser. However, carriers can reward the more cost-effective groups by directing enrollment their way. Moreover, carriers invest in joint marketing projects with the more efficient medical groups. Carriers can penalize high-cost groups by threatening to freeze or actually freezing enrollment or terminating contracts. State regulations in California do not permit health plans to offer cash rebates to consumers for choosing a particular medical group.
- Carrier competition insulates consumers from the costs of their choices: a customer pays one premium for access to a health plan, then can choose a high- or low-cost medical group within that plan's network. In employment groups that use managed competition, employees are rewarded with lower premiums for choosing lower-priced health plans, and health plans can use the above-described methods to influence patients to choose economical medical groups. So the reward for being a low-cost medical group may come indirectly.
- A carrier's reward for investing in information systems or personnel development to improve performance of its contracting medical groups or in preventive services for the group's whole population is attenuated because the benefits of the improvement will be shared with other carriers marketing those groups. However, as carriers achieve large shares of a group's business, they are likely to find that such investments make sense. In addition, they are finding that, through investments in information systems, they may gain the loyalty of medical groups.

Today, the carriers' ability to pressure providers is enhanced as the carriers consolidate through mergers. Provider groups may not be able to afford to refuse a large carrier's demand for price reductions if the carrier controls a large portion of the group's business and as the oversupply of providers increases. This has enabled for-profit carriers to maintain their gross margins which, for HMOs in California in 1993, ranged from 4.7% to 29.8% (California Medical Association: "Knox-Keene Plan Expenditure Summary, FY 1993–1994"; excludes plans with enrollment below 30,000). This variation reflects large differences in accounting for profit and administration as well as in the services HMOs provide. Health maintenance organization retentions may be used to support quality measurement and improvement, to reduce the costs of services in the future, to invest in the health of the enrolled population, or to finance expansion.

TABLE 1.—*Proportion of Enrollees in HMOS/POS, 1995*

Purchaser	*Enrollees*	*% HMO/POS*
California	12,057,900 (a)	38.36%
CalPERS	954,000	80.60%
FEHBP (est.)	495,000	55.67%
PBGH (est.)	330,000 (a)	69.00% (b)
Stanford (est.)	22,000	100.00%
UC (est.)	250,000	90.27%
HIPC	97,000	94.67%
Medicare	3,512,500 (c)	25.84%

Source: Hoechst Marion Roussel, HMO-PPO Digest, 1995; CalPERS; US OPM; PBGH; JC Robinson, "Health Care Purchasing and Market Changes in California" Health Affairs (Winter 1995); Stanford University; UC; MRMIB: HCFR: Medicare and Medicaid Statistical Supplement (1995).
a = 1994.
b = Proportion of employees in HMOs range between 50% to 97% for PBGH employers. Negotiating alliance contracts with 100% HMOs.
c = 1993.

Purchasers

Most employers fall into the following categories:

- Those who employ most or all of the interventions to manage competition among competing providers and who embrace managed care. These employers drive down prices and experience high and rising HMO market shares. HMO penetration among the employers receiving the greatest reductions is substantial (Table 1).
- Those who offer a combination of fee-for-service (FFS) health plans and HMOs, but pay all or most of premiums. These employers give HMOs an incentive to shadow-price the more expensive, typically FFS, plans. Since the outlays of these employers are tied to increases in FFS rates, their costs will rise.
- Those who offer only FFS coverage and pay all or most of the cost. They will feel the full force of provider surplus and excess utilization.

Given potential customers with a wide choice of plans, the ability to compare them, and a financial incentive to seek value for money, health plans competing for business have good reason to provide high-quality care at the lowest possible rates. Some purchasers in California have made progress in creating these circumstances.

Pacific Business Group on Health

The PBGH is an employer coalition including such influential employers as Bank of America, Safeway, and Pacific Telesis, 17 of which participated in the 1996 health plan negotiations, representing $400 million in premiums. The majority of PBGH employers require employees to pay the difference in premiums or are eliminating the subsidy of more expensive plans. Health plans agreed to meet performance standards on quality of care, customer service, and data provision. The HMOs each put a total of 2% of premium at risk for all performance standards, weighted according to each health plan's relative weaknesses.

Stanford University

During an annual open enrollment period, Stanford University offers employees a choice among four HMOs, one with a "point-of-service option" that covers out-of-network care after a deductible with increased cost-sharing. Since 1992, Stanford has required employees to pay the full difference in premium for a more expensive plan. With the success of the policy in reversing premium growth, Stanford increased employer contributions to share the savings with employees.

University of California

In 1993, the University of California (UC) similarly replaced an inflationary contribution formula that paid up to the average of the four biggest plans with a contribution set at 100% of the low-priced plan serving all campuses. An analysis of the response of UC employees suggests that 26% of health plan enrollees will switch to a cheaper plan when the monthly premium for their own plan rises by $10.[1]

Health Insurance Plan of California

The Health Insurance Plan of California (HIPC) offers a choice of 24 health plans to more than 5,000 small businesses throughout the state. Before the HIPC, employees of small firms seldom had a choice of plans. The contribution policies of participating employers are unknown. However, employers are required to contribute at least 50% of the low-priced premium. In order to make the HIPC attractive to younger, typically healthy firms, the HIPC offers rates by age category and family size. In addition, the HIPC adjusts payments to health plans based on average risk profile of enrollees, using diagnostic information.[2] This will ensure that health plans that attract higher risk populations will be compensated for their additional costs. The HIPC conducted a focus group for enrollees on quality and responded by providing certain access information about health plans.

State of California

CalPERS purchases health care benefits for people working in more than 1,000 participating public agencies. The state is the largest employer with almost 640,000 covered lives, or 67% of CalPERS enrollees. The state used to pay 100% of individual premiums up to the average of the four largest plans in the program (90% for dependents), a formula that denied health plans with below-average premiums a marketplace reward for reducing premiums, and thus was a major contributor to inflation. In the spring of 1992, the state froze its maximum contribution to employees' benefits at 1991–1992 levels in response to the state's fiscal crisis. This put employees at risk for future premium increases above the maximum. However, due to premium reductions, 19 of 24 of the health plans' individual premiums, including all the HMOs, were completely paid by the state in 1995. CalPERS relied on threats of enrollment freezes or cancellations of contracts to negotiate prices, explaining why CalPERS was able to negotiate only a 1.1% decrease in average premiums for the 1994–1995 contract period despite its vast size. As of May 1998, the state was still negotiating with its unions on an employment contract likely to include a new contribution formula.

Providers

Payment reforms have driven organizational change in health care delivery in California.

- Physicians have coalesced into integrated medical groups and IPAs, each capable of bearing capitation risk for tens to hundreds of thousands of patients. These groups are developing complex ownership and contractual relationships with hospitals and outside specialists and constitute the core of the emerging capitated delivery system.

TABLE 2.—*Large Integrated Medical Groups and IPAS in California, According to Nature of Ownership Relations with Hospitals, 1996*

	HMO patients (a)	Physician mix	Inpatient services (b)	System relations
Majority ownership by a hospital system				
Facey Medical Group	57,000	Multispecialty group	Contracts	UniHealth
Harriman Jones Medical Group	50,000	Multispecialty group	Integrated	UniHealth
Huntington Provider Groups	195,000	Multispecialty IPA	Contracts; integrated	UniHealth
San Jose Medical Group	85,000	Multispecialty group	Contracts	UniHealth
Gould Medical Foundation	49,000	Multispecialty group	Contracts; integrated	Sutter
Palo Alto Medical Clinic	59,000	Multispecialty group	Contracts	Sutter
Sutter Medical Group	42,000	Multispecialty group	Integrated	Sutter
MedClinic	70,000	Multispecialty group	Integrated	CHW
Scripps Clinic Medical Group	72,000	Multispecialty group	Integrated	Scripps
Sharp Rees-Stealy Medical Group	140,000	Multispecialty group	Integrated	Sharp
Sharp Mission Park Medical Group	50,000	Multispecialty group	Integrated	Sharp
Sharp Community Medical Group	70,000	Multispecialty IPA	Integrated	Sharp
Good Samaritan Medical Group	62,000	Multispecialty group	Integrated	Health Dimensions
Partial ownership by a hospital system				
Beaver Medical Group	60,000	Multispecialty group	Contracts	UniHealth
Bay Physicians Medical Group	125,000	Multispecialty IPA	Contracts	Alta-Bates
California Pacific Medical Group	109,000	Multispecialty IPA	Contracts	CPMC
Hill Physicians Medical Group	225,000	Multispecialty IPA	Contracts	CHW
No hospital ownership				
Bay Care	22,000	Primary care IPA	Contracts	Independent
Bristol Park Medical Group	110,000	Primary care group	Contracts; integrated (c)	Independent
HealthCare Partners Medical Group	240,000	Multispecialty group	Contracts	Independent
Permanente Medical Group	4,617,000	Multispecialty group	Contracts	Independent (d)
San Mateo IPA	56,000	Multispecialty IPA	Contracts	Independent
CIGNA Medical Group (e)	307,000	Multispecialty group	Contracts	Caremark
Friendly Hills Medical Group	110,000	Multispecialty group	Integrated; contracts (f)	Caremark
FHP Medical Associates (g)	151,000	Multispecialty group	Contracts	FHP; CompreCare
Foundation Health Medical Group	65,000	Primary care group	Contracts	Foundation Health HMO
Mullikin Medical Centers	320,000	Multispecialty group	Contracts; integrated (h)	MedPartners
Mullikin IPA	55,000	Multispecialty IPA	Contracts; integrated (h)	MedPartners
Pacific Physician Services (PPS)	290,000	Multispecialty group	Contracts; integrated (i)	Independent

Source: J Robinson and L Casalino, "Vertical Integration and Organizational Networks in Health Care", Health Affairs, Spring 1996.
a = These figures represent number of enrollees within CA in early 1995.
b = "Contracts" implies that the physician group contracts with one or more hospitals for hospital services for most of its patient enrollees. "Integrated" implies that the physician group uses one or mor hospias fom the hspitalsystem that "owns" the physician group for most of its patient enrollees.
c = Some use of Coastal Community Hospital, which is 50 percent owned by Bristol Park.
d = Physicians are employed by the Permanente Medical Group, which has an exclusive contract to provide physician services to Kaiser Foundation Health Plan and Hospitals.
e = Until 1995, when the group was sold to Caremark, the physicians were employees of the CIGNA HMO. CIGNA also owned a hospital, which it sold in 1992.
f = Most Friendly Hills patients go to Friendly Hills Regional Medical Center, which is owned by Caremark.
g = Until 1995, when FHP spun off its physicians into a separate entity to be owned by FHP's CompreCare Medical Services Organization, physicians were individual employees of FHP. In 1995, FHP sold its four hospitals.
h = Some Mullikin patients go to Pioneer Hospital, which is owned by MedPartners.
i = Some PPS patients go to Doctors Hospital of Montclair, which is owned by PPS.

- The central role played by organized physicians—whether in integrated medical groups or IPAs—distinguishes the California model of managed care from managed care in other states, in which physicians often are employed by hospitals or contract as individuals with HMOs. California medical groups and IPAs have negotiated with HMOs to receive the part of each capitation dollar that goes for physician services and, in many cases, part or all of the dollars earmarked for hospital and ancillary services as well, which enables them to purchase these services in what they think is the most efficient way possible. Organized groups of physicians, rather than HMOs or hospitals, bear much of the financial risk of managed care. HMOs delegate much of the work of managing care to the physician groups and often play only a relatively inactive oversight role in the management of care.[3]

Table 2 lists some of the largest integrated medical groups and IPAs in California.* All of the medical groups and IPAs are aggressively seeking to bring in more primary care physicians while virtually ceasing to hire new specialists. Since most primary care physicians belong to more than one IPA, competition for their loyalty is fierce.

In the past and in the rest of the country, providers work in small independent practices or in groups. In California, the question is increasingly what type of group.

Advantages of Large Medical Groups

Small independent practices cannot stand alone in California; the advantages of belonging to a large integrated medical group or IPA are overwhelming. The immediate reason why primary care physicians link their fate to that of larger organizations is that contracts with health plans are available only through these organizations. Beyond this, however, there are four reasons why integrated medical groups and IPAs have advantages over small independent practices: economies of scale; ability to spread the financial risk of capitation payment; reduction in the transaction costs of negotiating, monitoring, and enforcing agreements; and creation of an organizational context for continuous process innovation.

Comparing Medical Groups With IPAs

Like integrated medical groups, well-managed IPAs can provide scale economies through shared administrative functions, spread the risk of capitation payment, and reduce the transaction costs of negotiating with hospitals and payers. But IPAs face structural limitations in seeking to create a physician group culture and the innovation in clinical dimensions of care that such a culture can facilitate. Independent practice associations offer strong countervailing advantages, however, at least in the short run. They require less capital to grow, since they do not purchase physician practices or build new clinics. They are attractive to physicians who value professional autonomy and who will work harder if they remain the sole proprietors of their own small businesses than if they become equity owners and/or employees of some larger entity. Most major integrated medical groups now own or manage IPAs as a means of extending their HMO contracts over more enrollees, thereby gaining bargaining leverage with health plans and as a means of gradually attracting IPA physicians and enrollees to join the integrated groups.

Primary and Specialty Care

Under capitation, the operational question becomes how many specialists and specialties to bring inside, and how many to keep outside. Integrating specialists (the "make" option) enables a culture of cooperation and mutual education across specialties, interest among member physicians in the group's success, and informal and cooperative utilization management for internal patient referral through physician compensation mechanisms that are based on overall group performance rather than on charges billed by individual clinicians.

The advantage of contracting for, rather than owning, specialty services (the "buy" option) lies in the enhanced range of specialists and stronger performance incentives. A primary care group can achieve a broader geographic and ethnic panel of specialists and easier realignment of compensation levels and performance guarantees if they can terminate a contract. Cooperation from outside specialists can be achieved by focusing on a limited panel.

Virtually all large California integrated medical groups and IPAs are multispecialty, albeit with a strong primary care base. This is not surprising, given that California is in transition and that today's organizations have evolved from the specialist-dominated organizations of the FFS past. It remains to be seen whether primary care groups and IPAs will emerge that can achieve the type of cooperation and collaboration with outside specialists that multispecialty groups can achieve with their members.

Physicians and Hospitals

The relevant focal point for discussion in California is not the relationship between the hospital and individual clinicians, but rather the relationship between the hospital and the medical group or IPA. Furthermore, the discussion should shift from how the hospital can coordinate professional services to how physicians can choose to either "make or "buy" institutional services.

Some hospital systems in California are investing in medical groups and IPAs in an attempt to develop integrated delivery systems. Others are being forced to adjust to a new role as price-taking subcontractors in the managed care food chain. Three broad variants of medical group/hospital relationships are emerging:

- Some hospital systems are acquiring both integrated medical groups and IPAs as a means of acquiring managed care expertise and of having a primary care base (for example, Sharp, Scripps, Sutter, UniHealth, Catholic Healthcare West [CHW]);
- Some hospital systems are purchasing minority ownership in medical groups and IPAs to support long-term contractual relationships while maintaining the performance incentives of organizational independence (for example, UniHealth's share in Beaver Medical Clinic, CHW's share in Hill Physicians Medical Group);
- Hospitals that neither own nor are owned by medical groups perform as subcontractors to medical groups or to HMOs, paid mostly through subcapitation or on a negotiated per diem basis. Medical groups often avoid hospital

*The information in Table 2 on enrollment, ownership, and relations with hospitals was developed through in-person interviews over a 2-year period, checked against available information in the trade press.

capitation under the assumption that hospitals perform little of the work of managing care and thus should not share the savings generated by physicians' utilization management. It is unusual for hospitals in California to receive capitation payment from an HMO directly.

The potential advantages of integrated delivery systems over systems in which medical groups and hospitals remain autonomous and antagonistic are obvious. Cooperation between physicians and hospitals can encourage efficient use of services and smooth transition to postacute care. Integration can discourage the duplication of clinical services. Vertical integration also facilitates cooperation in contexts in which financial incentives are misaligned. The single bottom line of the vertically integrated delivery system can attenuate the conflicts produced by hospital diagnostic-related groups and physician FFS or physician capitation and hospital per diems.

Some advantages of cooperation can be achieved through contractual means and "virtual integration." The independent medical group or IPA can escape paying the maintenance costs of the excess capacity that the hospital systems are unable or unwilling to eliminate. Independent medical organizations can move patients efficiently through the system even without the hospital's cooperation, through nurses hired to follow their inpatients daily or through exclusively hospital-based medical teams.

In practice, the large California medical groups and health delivery systems have responded to market pressure from purchasers and HMOs positively by finding ways to reduce costs while improving quality. Although there is no routinely reported, standardized data to document this response, the following examples suggest that the scale and quality of this kind of cost-reducing, quality-improving activity is different from a few years ago.

Clinical Improvements

Clinical improvements will be the main source of continued savings in the health system in the future. Clinical effectiveness initiatives at Sutter Community Hospitals of Sacramento produced savings of $1.9 million in 1994. Sharp HealthCare's Grossmont Hospital, near San Diego, reduced the inpatient stay for hip replacement surgery from 8 days in 1989 to 3.4 days in 1995 and cut costs by $4,500 per case.[4] Kaiser Southern California reduced the average utilization of hospital days per 1,000 for its elderly population by 30%, saving $6.3 million per year between 1991 and 1994, which was driven primarily by the drop in inpatient stays. In 1992, UniHealth, based in Burbank, assigned clinical case managers to a specific diagnosis, rather than to a unit, reducing the overall cost per case by 39%, for a total savings of more than $277,000 over nine months for one diagnosis in one hospital.

Appropriate Clinical Capacity

One way to reduce costs is to consolidate to eliminate excess capacity. There are formidable barriers to closing hospitals, particularly nonprofit hospitals. After losing $20 million in the region, CHW's Sacramento regional board announced plans to close one facility with 210 beds, which is expected to yield estimated savings of $10 million per year. The sale of the nonprofit Good Samaritan Health System of San Jose to for-profit Columbia–HCA Healthcare Corporation announced in late 1995 may predict a future trend. To make Good Samaritan profitable, analysts expect Columbia to close or convert two of Good Samaritan's three hospitals into outpatient facilities, eliminating duplicate services and cutting staff.[5]

Economies of Scale

Systems can achieve economies of scale through consolidation of duplicative services. In 1994 Sharp restructured its seven hospitals, consolidating some functions across the organization, eliminating 100 of 131 managers, saving $7 to $8 million per year, and centralizing others, saving another $3 million per year.

Prevention

Appropriate care provided early saves money for systems in the long run. Friendly Hills, near Los Angeles, employs nurse practitioners trained in geriatric medicine to follow closely its patients in nursing homes, reducing by more than half, to 71 in 1994, the transfer of patients from extended-care facilities to the acute care hospital.

Appropriate Incentives

Systems can promote appropriate and efficient care through physician compensation by putting physicians at risk for the cost of care and cost of poor quality. At HealthCare Partners, based in Los Angeles, approximately 250 mostly primary care physicians receive a salary plus a bonus based on quality measures that can equal up to 30% of the base salary.

Use of New Technologies

Adopting new technologies can have significant impact on cost and quality. An on-line patient record and a pharmaceutical interaction database enabled Sharp to implement a successful telephone-based nurse triage system that satisfactorily handles more than 60% of the approximately 1,000 phone calls per month from patients seeking medical advice, resulting in an estimated 10% reduction in office visits. In 1991, Sharp began investing in a new information system that integrates patient care, financial, and human resources information across all Sharp facilities. Laboratory, pharmacy, radiology, and transcription also share the same system.

Academic Medicine

Large cost-cutting opportunities exist in academic medical centers. In six years, Stanford reduced its annual hospital budget by $110 million and increased revenue by more than $36 million through operations improvements.

TABLE 3.—*Health System Utilization Statistics, California Vs. US*

	CA	% Chg/Yr Since 1990	UC	% Chg/Yr Since 1990
AHA (1993)				
Short Stay Hospital Days/1000	561.24	(4.05%)	838.91	(2.68%)
Hospital Beds/1000	2.51	(2.52%)	3.57	1.54%
Medicare (1993)				
Short Stay Hospital Days/1000	1,656	(4.76%)	2,503	(3.50%)
AMA (1994)				
Physicians/100,000	268	0.47%	263	2.85%
Percent Primary Care (a)	38.11%	— (b)	38.42%	— (b)
Physician Graduates /1000	331 (c)	(9.67%) (d)	607 (c)	(8.81%) (d)
UMGA versus US (1994)				
Adjusted total hospital days/1000				
Commercial				
Average	151	(9.89%)	277.4	(4.92%)
Most Efficient	109	0.94%	— (b)	— (b)
Least Efficient	284	(12.61%)	— (b)	— (b)
Seniors				
Average	1020	(6.15%)	1682.1	0.82%
Most Efficient	652	(9.29%)	— (b)	— (b)
Least Efficient	1601	(8.14%)	— (b)	— (b)
Visits per member per month				
Commercial				
Average	3.78	(2.77%)	3.6	2.20%
Most Efficient	2.06	6.69%	— (b)	— (b)
Least Efficient	5.45	(4.78%)	— (b)	— (b)
Seniors				
Average	8.33	(2.56%)	7.9	5.00%
Most Efficient	3.52	(7.27%)	— (b)	— (b)
Least Efficient	14.02	(1.89%)	— (b)	— (b)

Source: AHA, 1994 AHA Hospital Statistics; HCFR: Medicare and Medicaid Statistical Supplement (1992, 1994 and 1995); AMA, Physician Characteristics and Distrbtin in the US (1992-93 and 1993-94); UMGA; and Hoechst Marion Roussel, HMO-PPO Digest, 1995.

a = Primary care includes faily practice, general practice, internal medicine, obstetrics/gynecology, and pediatrics.
b = Information not available.
c = 1990-1994 average.
d = Percent change between 1990-1994 and 1980-1989 averages.
e = National data taken from Hoechst Marion Roussel, HMO-PPO Digest (1995). Hospital days include acute hospital days only.

Costs

The reorganization of the delivery system and the combination of efforts of some medical groups, however, have begun to make an impact. Recent data show the beginning of a lower cost structure in California (Table 3).[6]

American Hospital Association and Medicare

The American Hospital Association (AHA) and Medicare statistics reveal faster declines in resource use in California than nationally. The number of hospital beds and inpatient days in short-stay hospitals per 1,000 residents is lower and has declined faster in California than the national average between 1990 and 1993.

American Medical Association

American Medical Association statistics show modest advances in California in comparison with national trends. The number of physicians per 100,000 population in California is approximately equivalent, but has risen much more slowly than the national average. California employs approximately the same proportion of primary care physicians as the national average (Unified Medical Group Association, based on 27 California medical groups with 19.2 million member-months on commercial plans 2.2 million member-months on senior plans).[7–9] This is surprising in view of the level of managed care penetration in California, but may reflect a data lag. The number of physician graduates per 1,000 per year between 1990 and 1994 is significantly smaller than the US average and has declined more since the previous decade.

Unified Medical Group Association

Medical groups, especially the most efficient, are using fewer resources compared with national statistics.

TABLE 4.—*California Weighted Average Health Care Premiums (1992–1996)*

Purchaser	1996 WA ttl prem/mo (a)	1996 WA ind prem/mo (a)	Percent chg in weighted avg ttl prems 95–96	94–95	93–94	92–93
CalPERS	$313.70	$168.63	-4.00%	-1.10%	1.40%	6.10%
CalPERS (HMO only)	— (b)	— (b)	-5.30%	-0.70%	-0.40%	6.90%
FEHBP (HMO only)	$291.92	$161.74	-4.47% (c)	-5.81%	2.91%	6.13%
PBGH	— (b)	— (b)	-4.30%	-9.20%	— (b)	— (b)
Stanford	$256.50	$156.75	-4.80% (c)	-6.16%	5.21%	8.54%
UC	$280.81	$151.89	2.45% (c)	-9.96%	-6.33%	1.92%
HIPC	$248.30	$116.89	-2.81%	-3.65%	— (b)	— (b)
HIPC (HMO only)	— (b)	— (b)	-3.39%	— (b)	— (b)	— (b)
Medicare	$281.42 (e)	$281.42 (e)	— (b)	— (b)	— (b)	3.26%

Source: CalPERS; US OPM; PBGH; J Robinson, "Health Care Purchasing and Market Changes in CA", Health Affairs (Winter 1995); Stanford University; UC; MRMIB; HCFR: Medicare and Medicaid Statistical Supplement (1995).
a = Benefit packages are not comparable.
b = Information not available.
c = Weighted by 1995 enrollment.
d = Excludes catastrophic plans.
e = 1993.

The average adjusted total hospital days per 1,000 population are low and declining more rapidly.

While the overall indicators and specific examples are encouraging, there is still a great deal of room for improvement. In California, as elsewhere, there is an excess supply of hospitals, hospital beds, and specialists. The spot market price for the services of redundant providers has plummeted. The published figures on the hospital and specialist surplus underestimate, perhaps dramatically, the degree of excess capacity because they use as the benchmark for comparison the rates of hospital days and specialty referrals reported in traditional staff-model HMOs. Health system administrators predict impending layoffs of physicians and hospital closures. The average hospital occupancy rate in California was 52.4% of licensed beds in 1994,[10] suggesting that many are underutilized at least some of the time. Excess hospitals and bed capacity lead to strategies to fill beds and to excess costs. According to the Unified Medical Group Association (UMGA), the most efficient medical groups currently provide care using a total of 170 total adjusted hospital days per 1,000.† Assuming a desirable occupancy rate of about 85%, these UMGA rates, though perhaps unrealistic in the short run, imply that we need 0.55 beds per 1,000, or approximately 17,109 beds in California (based on 1993 California resident population of 31,211,000[12]). According to the AHA, California had 78,481 licensed beds in 1993,[13] more than 4-1/2 times the requisite number.

Too many hospitals continue to do costly, complex procedures. Hospitals could achieve less expense and less morbidity and mortality by concentrating procedures such as open heart surgery in efficient regional centers.[14,15] Instead, despite the American College of Cardiology's recommendation of a minimum of 200 to 300 open heart surgeries per facility per year, only 57 of 119 California hospitals in 1992 performed at least 200, and only 28 performed more than 300.[16] Closing departments and hospitals is proving difficult politically, especially in the nonprofit sector as local communities, local boards, and big donors all struggle to keep them open.

Although the number of medical school graduates has leveled off in California, as in the rest of the country, there are still too many. Medical residents with specialized training have found few jobs and low pay awaiting them, especially in California.[17,18] Physician salaries face pressure with excess supply. Managers of medical groups in California typically estimate necessary reductions of beds and physicians of 50% or more. Too many specialists may do too few procedures per physician and lack proficiency, or they may do too many per capita and provide inappropriate services.

There remain significant variations in utilization statistics of medical groups across California. The UMGA reported that in 1994 for commercial plans among 27 medical groups in California, visits ranged from 2.06 to 5.24 visits per member per year and total adjusted hospital days for those younger than 65 ranged from 109 to 197 per 1,000. For senior plans, visits ranged from 3.52 to 13.03 visits per member per year, and total adjusted hospital days ranged from 663 to 1601 days per 1,000. Although these groups have not been audited for quality or adjusted for risk, these data suggest that some medical groups are performing relatively economically while many could improve.

Prices

The rationalization of the delivery system has resulted in lower costs for purchasers. This is an extensive departure from the trends of the past 35 years. However,

†Assumes a mix of 89% commercial to 11% seniors, based on a mix of older-than-65 and younger-than-65 resident population in California in 1993.[11] Total adjusted hospital days include days in acute, skilled, nursing, and psychiatric care facilities. Days are not adjusted for demographic characteristics such as age (other than senior and not senior) or risk mix.

TABLE 5.—*Health Care Marketplace Comparison California and US Average, 1993 and 1996*

	Weighted avg individual premium/mo		% of population in HMOs	
	FEHBP (HMO only) (a)	Medicare (b)	FEHBP (c)	Medicare (b)
Location				
California	$161.74	$290.58	55.67%	25.84%
US average	$168.74 (d)	$301.33	29.10%	6.97%
Increase from previous year				
California	–3.94%	3.26%	4.86%	18.11%
US average	–0.70% (d)	4.96%	2.46%	10.89%

Source: US OPM; and HCFR: Medicare and Medical Statistical Supplement (1994 and 1995).
a = 1996.
b = 1993.
c = 1995.
d = Excludes California. If California were included, the weighted average individual premium for the FEHBP would have been $166.05 per month, a decrease of 1.93% from 1995.

total health expenditures in California may not be declining because the cost of government programs and the costs of the uninsured are still increasing. In addition, premiums may again increase.

The Large Group Market

CalPERS, the Federal Employees Health Benefits Program (FEHBP), PBGH, Stanford, UC, and the HIPC have all experienced declining premiums in the past three years. The UC system experienced the largest three-year reduction: –19.3% for 1993–1994 through 1995–1996 (Table 4).

The Small Group Market

The HIPC is a state-run pooled purchasing arrangement, begun July 1, 1993, for small employers with between 3 and 50 employees. The HIPC rates set a benchmark for the rest of the small group market because they are released early. Health plans that provide coverage to small groups exclusively outside the HIPC follow the premium trends in the HIPC in order to compete. The rate declines for the HIPC in the past several years, therefore, have been fortunate for small employers purchasing outside the HIPC.

National Purchasers

National health care purchasers, including the FEHBP and Medicare, have fared better in California than nationally (Table 5).

FEHBP. Purchaser of health coverage for 9 million federal employees, annuitants, and dependents nationally, the FEHBP experienced a greater decrease in 1996 weighted average premiums for community-rated plans in California compared with the national average of FEHBP community-rated plans. Weighted average California premiums for individuals, at $161.74 per month, are already lower than the national FEHBP average.

Medicare. Program payments have increased at a lower rate in California than the US average.[19] The number of Medicare beneficiaries in prepaid plans was also greater and increasing faster in California than the US average. These price declines, despite Medicare's inflationary reimbursement of HMOs at 95% of the average adjusted per capita cost in a market area, may reflect spillover from competition in the private sector.[20,21]

MediCal. Since MediCal (California's medicaid) rates are determined through a political process, rate fluctuations cannot be attributed to changes in costs alone. In addition, the experience of private employers and public programs tells us nothing about the costs of uninsured persons, the number of which continues to increase.

The Future: Relationship Among Payors and Medical Groups

Market forces will continue to shape the relationship among health plans and medical groups in California. Market forces are driving out excess capacity. Hospitals are consolidating. Physicians are leaving practice in California. One report noted at least 50 physicians left the Sacramento region last year because of the squeeze.[22] A new equilibrium will be reached.

As delivery systems merge and grow, provider groups will enroll so many people in a given market, it would be difficult for a health plan not to contract with it.

Carriers will have to allow delivery systems enough revenue to generate capital for facilities and to hire good doctors.

If purchasers continue strategies to improve competition among health plans, carriers will need to find ways to differentiate themselves, or margins will suffer. Already, where benefits are standardized and carriers contract with overlapping provider networks, the carriers become virtually perfect substitutes and demand completely elastic, making competition intense. Both Stanford and UC have benefited from this as purchasers. Strategic alliances with particular delivery systems that carriers emphasize and in which they invest would be a way for carriers to differentiate themselves.

Alternatively, medical groups could create their own health plans to market their services directly to employers. Several medical groups have attempted this without

great success. Sharp, Mullikin Medical Centers, Sutter, and UniHealth all operate or own to some degree HMOs. However, these examples make up a small proportion of the HMO business in California. UniHealth is also the largest shareholder of Pacificare, but maintains an arms-length relationship. In addition, the California Medical Association has formed its own managed care organization.

Provider groups in California are limited in aggressively marketing their own health plans by fear that other health plans will stop marketing their provider services in retaliation. In addition, most integrated delivery systems see a distinct marketing role for health plans. The issue they raise is whether that role is worth 20% or more of premiums. On the other hand, given the record of providers, it seems reasonable to question whether a provider-run health plan would push medical groups aggressively enough to reduce costs and monitor quality. Moreover, carriers in California have large capitalizations, while provider groups have little, making it difficult for the latter to comply with solvency requirements for HMOs and to compete effectively. Although eased requirements for provider-run organizations under the new Medicare regulations may change the current dynamic, new entry has been impractical given the resources required and because, even if the health plan were successful, in the short run, the medical group could suffer loss of enrollees due to health plan retaliation.

Although new delivery system–run health plans are unlikely, California already has a mixed model with the large presence of Kaiser Permanente: both delivery system and carrier competition. Each model has its strengths and limitations. Different states will evolve differently. The important thing for Californians now is that competition among the existing mix is driving down the costs of health care, and this trend appears likely to continue.

Relationship Among Medical Groups and Hospitals

The nature of the organizational relations between medical groups and hospitals is one of the central questions for the future of the health care delivery system.

The long-term determinants of organizational relationships under managed care involve economies of scale, efficient risk bearing, reductions in transaction costs, and the development of capabilities for innovation. In the short term, however, excess hospital capacity and medical groups' need for external sources of capital are exerting a strong influence on make-versus-buy decisions at every level of the delivery system.

Capacity

Excess capacity implies that a fundamental reallocation of revenues will occur to the benefit of primary care physicians and the other delivery system elements that face rising demand (subacute facilities, home health, physician extenders, and so forth) and to the detriment of hospitals and specialists. This reallocation can proceed most easily, from the point of view of primary care-based organizations, if relationships with hospitals and specialists are based on contracts rather than on unified ownership. Bureaucratic hierarchies create numerous possibilities for inertia and coalition formation that can block significant internal change.

Capital

A countervailing pressure toward vertical integration is exerted by the need of physician organizations for external sources of investment capital. To the extent that this capital is obtained from hospital systems, medical groups will become subsumed within hospital-centered delivery systems. There are now two principal sources of investment capital: hospital systems and publicly traded physician management companies such as PhyCor, Caremark, and MedPartners. As facilities burdened with excess acute care beds, hospital systems are not attractive organizational partners under managed care. As tax-advantaged, bond-financed multidivisional corporations, however, hospital systems are major players. Investor-owned physician management companies also are eager to offer capital, with strings attached, to medical groups. From the perspective of the medical group, these outside investors are attractive because of their lack of hospital beds, yet are disturbing because of their lack of local community commitment and their strict subordination to the equity markets.

California's experience of the past 15 years suggests that coordination of health care does not require vertical integration and unified ownership but may be achieved through contractual networks. The fair market test, for purposes of understanding the organizational trajectory of managed care, is not between vertically integrated delivery systems and the fragmented cottage industry of yesteryear but between vertically integrated systems and virtually integrated structures in which coordination is achieved through contract.

The relative advantages of vertical and virtual integration differ in each context.[23,24]

The advantage of vertical integration and unified ownership, compared with contractual relations and market bargaining, lies in the potential for coordinated adaptation to changing environmental circumstances. In principle, vertically integrated organizations manifest a unity of control and direction that allows them to focus all of the energies of their subunits on the same goals and strategies. This unity of purpose and performance is essential under managed care and underlies the drive toward vertically integrated delivery systems that incorporate primary care, specialty panels, and hospitals.

The advantages of virtual integration through contractual relations, compared with vertical integration through unified ownership, lie in the potential for autonomous adaptation to changing environmental circumstances. Organizational independence preserves the risks and rewards for efficient performance rather than replacing them with salaried employment. Coordination can be achieved through negotiated payments and per-

formance guarantees rather than through managerial authority. Numerous forms of contracts are observed in the market, ranging from arm's-length and anonymous spot contracts to close and complex franchise, multiyear, and "relational" contracts.‡

Vertically integrated systems suffer from two weaknesses: incentive attenuation and influence costs. Vertical integration replaces the entrepreneurship of the owner-managed firm with administrative hierarchies in which managers and clinicians are paid largely by salary. Even when supplemented by performance bonuses, salary payment mechanisms provide considerably weaker performance incentives than does the profit incentive. Vertical integration and unified ownership also greatly increase "influence costs," defined as the effects of internal struggles for control over resources by the various incumbent constituencies, both managers and nonmanagerial workers. In principle, incentive attenuation and influence costs could be controlled by introducing marketlike features within a large firm.[27–29] For example, particular products or geographic regions could be assigned to separate divisions and subjected to their own profit-and-loss accounting. In practice, however, large firms have proved unable to maintain this commitment to divisional independence and thereby undermine the marketlike incentives of the vertically integrated firm.

There are many possible paths to the coordination of clinical services under managed care. At every interface, firms confront a trade-off between the advantages of coordinated adaptation through vertical integration and the advantages of autonomous adaptation through contractual networks. The current turbulence makes it difficult to predict eventual outcomes. At a minimum, however, there will be considerably more contractual relationships and considerably less vertical integration than predicted by some advocates of hospital-centered delivery systems. On the other hand, there will be considerably more cross-ownership, through both minority and majority shares, than would be predicted by those with blind faith in atomistic competition. Market forces are creating both vertically integrated firms and virtually integrated networks. In turn, the new forms of organizations and contracts are transforming markets and the nature of competition in health care.

‡In many economic contexts, environmental change and uncertainty are too great to permit the explicit treatment of all possible contingencies in formal contracts. Economic agents develop long-term relationships based on bilateral exchange, reputations, investments in nonredeployable assets, and other forms of "credible commitment." These informal features of the relationship support the incomplete formal contractual agreements. For a general treatment of relational contracting, see Macneil.[25] For a general treatment of credible commitments, see Williamson.[26]

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